

Utah Influenza Report

This report contains data through the week ending 02/16/2013 (MMWR week 07).

Overview of Influenza Surveillance: Surveillance for the 2012-2013 influenza season officially began on September 30, 2012. The Utah Department of Health publishes a weekly report throughout the active influenza season that synthesizes data from a variety of sources to give the most complete and up-to-date picture of influenza activity in the state of Utah. Data in this report should be considered provisional, and may change as more complete reports are received.

Influenza-like Illness (ILI): The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) is a national system that conducts surveillance for influenza-like illness (ILI) in outpatient healthcare facilities. ILINet providers report weekly the total number of patients seen for any reason and the number of patients seen with ILI (defined as a fever $\geq 100^{\circ}$ F and a cough or sore throat). These data are used to determine the amount of ILI circulating in the community, as well as provide insight into regional differences in ILI activity. Currently, more than 50 facilities throughout Utah participate in ILINet.

Figure 1. Weekly Influenza-like Illness Activity

Influenza-like illness (ILI) activity as measured by the number of standard deviations from the epidemic threshold - Utah, 2012-2013

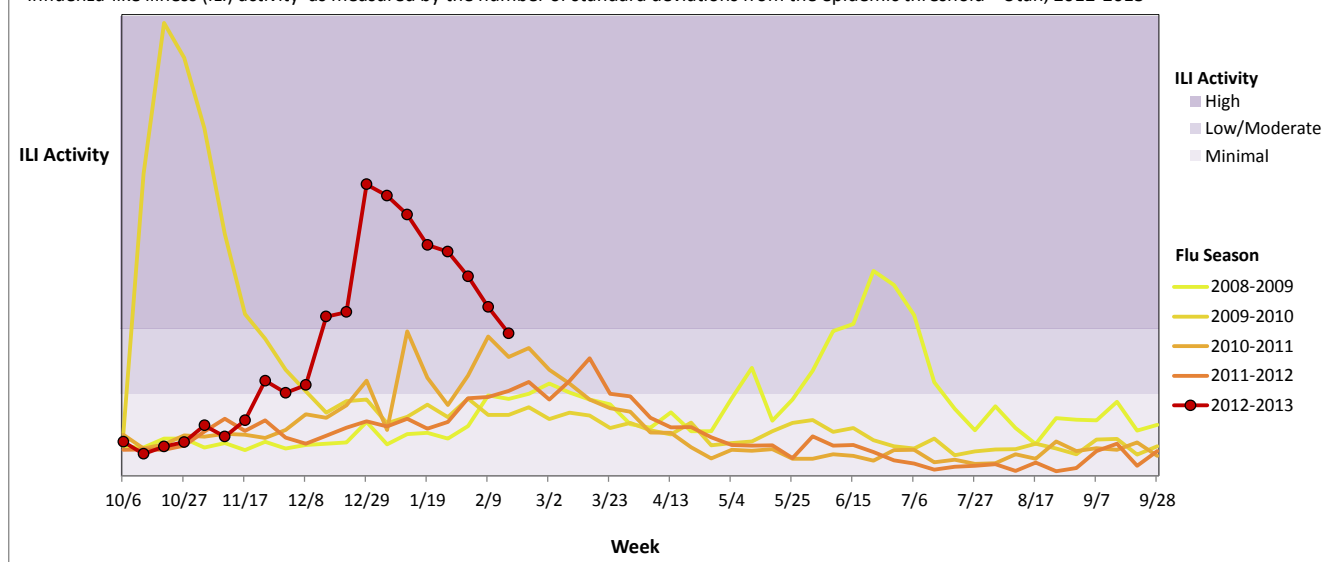


Table 1. Influenza-like Illness (ILI) Activity Levels by Health District - Utah, Current Week

Health District	ILI Activity
Bear River	Minimal
Central	Minimal
Davis	Low/Moderate
Salt Lake	High
Southeastern	No Data
Southwest	Low/Moderate
Summit	Minimal
Tooele	Minimal
TriCounty	No Data
Utah	Low/Moderate
Wasatch	Minimal
Weber-Morgan	Minimal
State	Low/Moderate

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Influenza Hospitalizations: Influenza hospitalizations are a reportable condition in Utah. A person meets the case definition for an influenza hospitalization if they are hospitalized for any length of time and have an influenza positive serology, DFA, PCR, or culture test (confirmed case) or a positive rapid influenza diagnostic test (probable case). Public health in Utah gathers a variety of data on influenza hospitalizations including clinical features, course of illness, risk and protective factors, and influenza type and subtype. Data from influenza hospitalizations allows public health in Utah to better understand subgroups of the Utah population that are most severely effected by influenza and help to guide prevention messages and interventions.

Figure 2. Influenza Hospitalizations

Number of influenza hospitalizations by event date* - Utah, 2012-2013

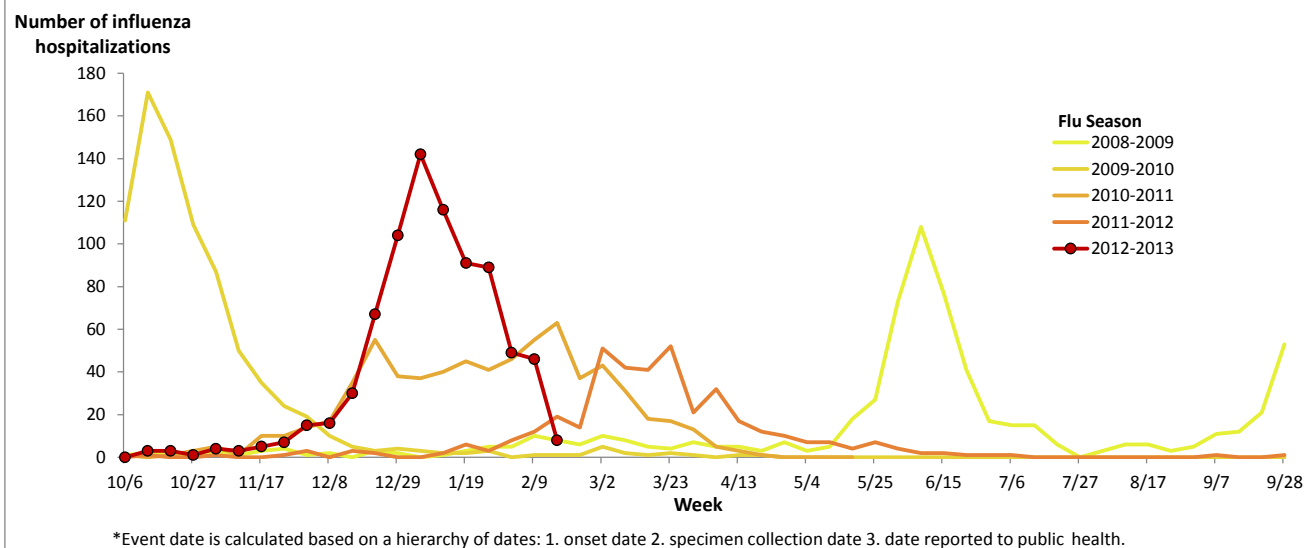


Table 2. Influenza Hospitalizations by Case Status - Utah

Case Status	Current Week		Season To Date	
	Total	% of Cases	Total	% of Cases
Confirmed	7	87.5	755	94.5
Probable	1	12.5	44	5.5
Total	8	100.0	799	100.0

Table 3. Influenza Hospitalizations by Health District - Utah

Health District	Current Week	Season To Date
Bear River	0	43
Central	0	34
Davis	0	62
Salt Lake	3	367
Southeastern	0	2
Southwest	1	91
Summit	0	12
Tooele	0	1
TriCounty	0	12
Utah	2	116
Wasatch	0	3
Weber-Morgan	2	56
State	8	799

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Table 4. Influenza Hospitalizations by Age Group - Utah, Season To Date

Age Group	Total Cases	% of Cases	Rate*
0-4	155	19.4	57.28
5-24	105	13.1	11.10
25-49	100	12.5	10.08
50-64	115	14.4	28.72
65+	324	40.6	131.18
Total	799	100.0	27.97

*Rate is calculated as the number of cases per 100,000 population

Table 5. Influenza Hospitalizations by Sex and Race - Utah, Season To Date

Variable	Num. of Cases	% of Cases	% in Utah Pop	p value*
Sex				
Male	391	48.9	50.3	0.4399
Female	408	51.1	49.7	0.4399
Unknown	0	0.0	NA	--
Race				
White, Not Hispanic	646	80.9	82.0	0.3816
Hispanic	96	12.0	11.6	0.7056
Native Hawaiian/Pacific Islander	26	3.3	0.7	<0.0001
Black/African American	11	1.4	0.9	0.1918
American Indian	3	0.4	1.1	0.0432
Asian	17	2.1	1.9	0.5893
Unknown	0	0.0	NA	--

*If a p value is ≤ 0.05 , there is a significant difference between the percentage seen in influenza hospitalizations and the general Utah population.

Table 6. Summary Data for Influenza Hospitalizations - Utah, Season To Date

Variable	Yes		No		Unknown	
	Total	% of Cases	Total	% of Cases	Total	% of Cases
ICU	111	13.9	582	72.8	106	13.3
Ventilator	43	5.4	653	81.7	103	12.9
Died	24	3.0	659	82.5	116	14.5
Neurological Symptoms	78	9.8	606	75.8	115	14.4
Healthcare Worker	5	0.6	436	54.6	358	44.8
Pregnant	26	3.3	713	89.2	60	7.5
Heart Disorder	237	29.7	457	57.2	105	13.1
Blood Disorder	17	2.1	673	84.2	109	13.6
Kidney Disorder	73	9.1	618	77.3	108	13.5
Metabolic Disorder	186	23.3	507	63.5	106	13.3
Chronic Respiratory Disorder	222	27.8	473	59.2	104	13.0
Immunosuppressed	75	9.4	614	76.8	110	13.8
Neurological Disorder	78	9.8	606	75.8	115	14.4
Seizure Disorder	24	3.0	668	83.6	107	13.4
Bacterial Co-infection	10	1.3	679	85.0	110	13.8
Obese*	101	18.8	161	30.0	275	51.2
Morbidly Obese*	20	3.7	242	45.1	275	51.2
Risk Factor†	729	91.2	70	8.8	0	0.0
Vaccinated	233	29.2	292	36.5	274	34.3

*Obesity and morbid obesity is not considered for individuals under 18 years or pregnant women. Thus total counts will not equal the total number of influenza-associated hospitalizations

†Risk factors for influenza include: persons < 5 years, persons ≥ 65 years, pregnant women, and persons with a chronic medical condition.

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Student Absenteeism: School-age children are at high risk for respiratory virus infections, including influenza. Aggregate, all-cause absenteeism data is collected weekly from over 350 schools throughout Utah. These data are analyzed to identify elevated absenteeism rates that could indicate the circulation of influenza in school-age children.

Figure 3. Student Absenteeism by Week

Rates for absences due to all causes - Utah, 2011-2012 and previous 3 year average

Absences per 100 Students

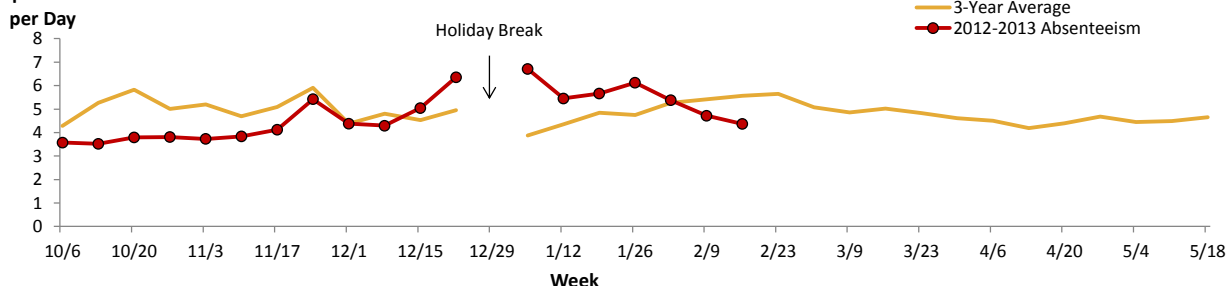


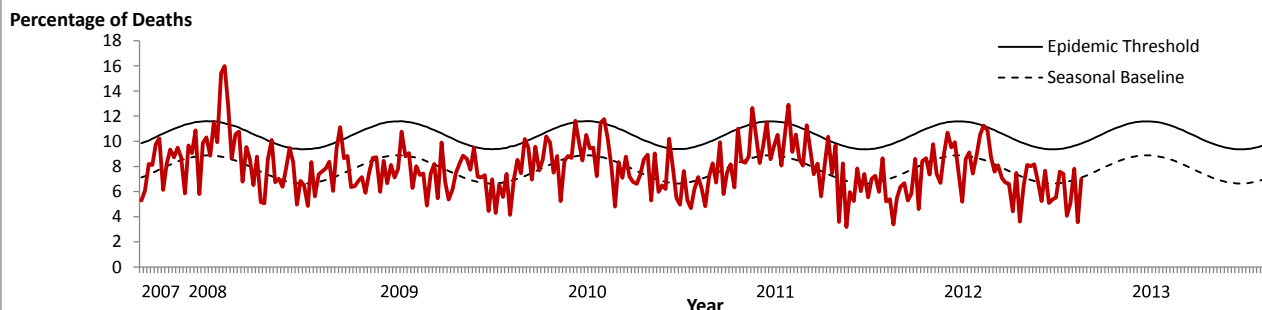
Table 7. Weekly Student Absenteeism - Utah, Current Week

Health District	Absences per 100 students/day
Bear River	3.9
Central	3.3
Davis	4.3
Salt Lake	4.6
Southeast	5.2
Southwest	5.4
Summit	--
Tooele	5.3
TriCounty	2.6
Utah	2.2
Wasatch	6.4
Weber-Morgan	4.7
State	4.4

Pneumonia and Influenza Deaths: Each week the total number of death certificates received and the number of those for which pneumonia or influenza was listed as an underlying or contributing cause of death is collected. The percentage of deaths due to pneumonia and influenza are compared with a seasonal baseline and epidemic threshold value calculated for each week. These data are used to monitor the severity of influenza illness in the community.

Figure 4. Pneumonia and Influenza Deaths

Percentage of deaths attributable to pneumonia and influenza by week of death - Utah, 2007-2013



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Laboratory Surveillance: The Unified State Laboratory: Public Health receives specimens from all over the state for comprehensive influenza testing. All specimens are tested to determine influenza type and subtype. A portion of specimens are also sent to the Centers for Disease Control and Prevention for additional testing, including gene sequencing, antiviral resistance testing and antigenic characterization.

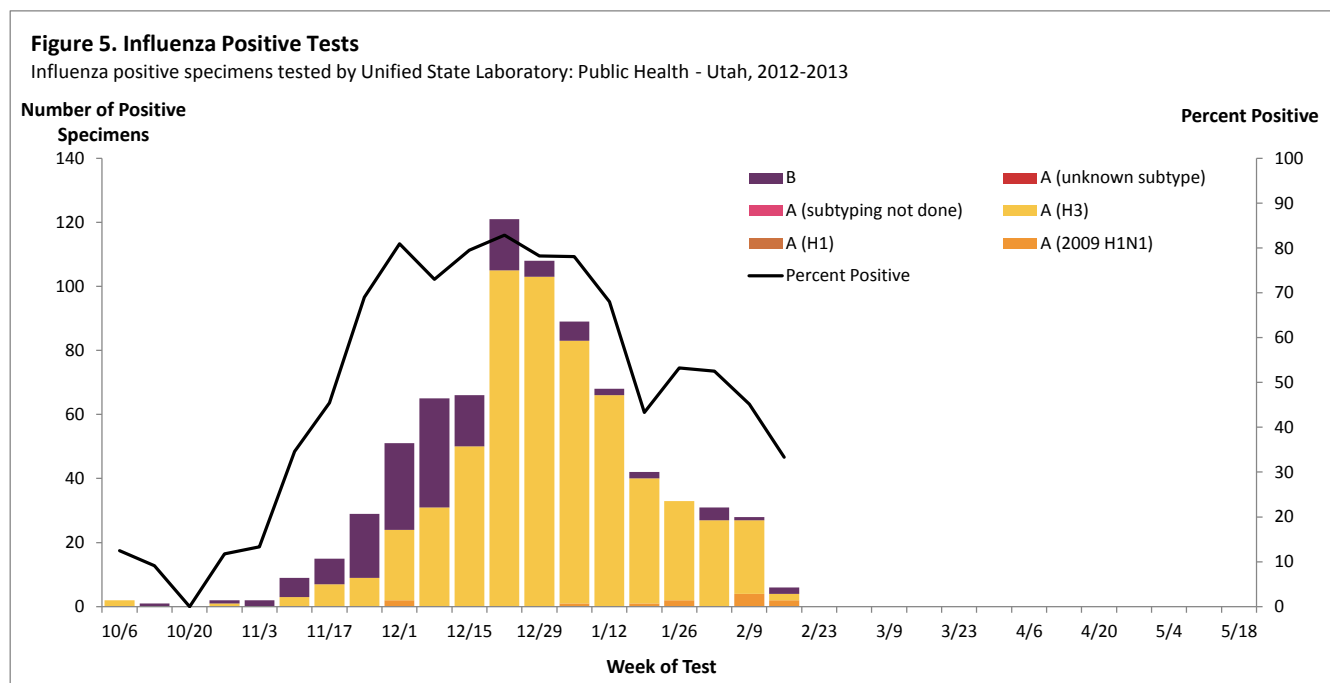


Table 8. Unified State Laboratory: Public Health Influenza Testing Data

	Current Week		Season To Date	
	Total	Percent	Total	Percent
Specimens tested	18	--	1,200	--
Positive specimens	6	33.3	768	64.0
Positive Specimens by Type/Subtype				
Influenza A	4	66.7	615	80.1
A (2009 H1N1)	2	50.0	12	2.0
A (H1)	0	0.0	0	0.0
A (H3)	2	50.0	603	98.0
A (subtyping not performed)	0	0.0	0	0.0
A (unable to subtype)	0	0.0	0	0.0
Influenza B	2	33.3	153	19.9